In the claims:

This listing of claims will replace all prior versions of claims in the application:

1.   (currently amended) In a communication network comprising:

at least one ~~at least one~~ a plurality of local name servers, each of the ~~said~~ local name servers being

capable of answering name-to-address resolution queries by using temporarily

stored information or by further querying other name servers,

at least one application server, ~~each said application server~~ having at least one

application server address and being capable of receiving requests for at least

one service and ~~of~~ performing ~~said~~ the at least one service, wherein ~~each said~~

the at least one service has a ~~distinct~~ service name,

a plurality of clients, each ~~said client~~ of the clients being associated with at least one

of the ~~said~~ local name servers, and being capable ~~to query any said~~ of querying

the at least one associated local name server for ~~the~~ an address of ~~an~~ the at

least one application server ~~providing a service with a specified service name~~,

to receive from ~~said~~ the at least one associated local name server an answer

specifying an address of ~~one said~~ the at least one application server, and to

send a request for ~~that said~~ the at least one service to ~~that~~ the at least one

application server having the address specified in the answer,

and at least one authoritative name server, ~~each said~~ the at least one authoritative

name server being capable of ~~answering~~ providing answers to name-to-address

resolution ~~querying~~ queries from ~~said~~ the local name servers ~~about any of said~~

~~services~~, the content of every answer having a validity period,

a method for discovering associations between the clients and the local name servers,

comprising the steps of:

(A) producing a query record concerning a query <u>from one of the local name servers</u> received by ~~an~~ <u>the at least one</u> authoritative name server and ~~the~~ <u>an</u> answer to ~~that said~~ <u>the</u> query, ~~said~~ <u>the</u> query record <u>including</u> ~~comprising at least some of the following information items~~:

    (q1) ~~an~~ <u>first application server</u> identifier of the <u>at least one</u> application server that is the answer to the query,

    (q2) ~~a name of a service provided by the application server,~~

    (q3) a <u>response</u> timestamp expressing ~~the moment in time at which~~ <u>when</u> the answer ~~is~~ <u>was</u> issued,

    (q4) a validity period defined for the <u>first application server</u> identifier ~~of said application server address~~, and

    (q5) ~~an~~ <u>local name server</u> address of the local name server from which the query ~~is~~ <u>was</u> received,

~~wherein said item (q1) is mandatory, if for all said application servers the union of their respective sets of application server addresses comprises more than one member; said item (q2) is optional,; said item (q3) is mandatory,; said items (q4) is mandatory if said validity period may differ from one said answer to another, otherwise it is a predetermined constant value,; and said item (q5) is mandatory;~~

(B) producing a request record concerning a service request <u>issued by one of the clients for a service and</u> received by <u>the at least one</u> ~~an~~ application server, ~~said~~ <u>the</u> request record <u>including</u> ~~comprising at least some of the following information items~~:

    (r1) ~~an~~ <u>second application server</u> identifier of the application server ~~at which~~ <u>that received</u> the <u>service</u> request ~~is received~~,

    (r2) ~~a name of the service provided by the application server,~~

(r3)   a <u>request</u> timestamp expressing ~~the moment of time at which the~~ <u>when</u> the <u>service</u> request ~~is~~ <u>was</u> received, and

(r4)   ~~an~~ <u>client</u> address of the client ~~having~~ <u>that</u> issued the <u>service</u> request;

~~wherein said item (r1) is mandatory, if for all said application servers the union of their respective sets of application-server addresses comprises more than one member; said item (r2) is optional, and said items (r3) and (r4) are mandatory~~; and

(C)   ~~finding~~ <u>comparing query records and request records to find</u> matching pairs of ~~one said~~ query record<u>s</u> and ~~one said~~ request record<u>s</u>, and associating the<u>local</u> name <u>server</u> address ~~of the local-name server from the~~ <u>in the matching</u> query record ~~in a matching pair~~ to the<u>client</u> address ~~of the client from the~~ <u>in the</u> <u>matching</u> request record ~~in the same matching pair~~, a matching pair being defined as ~~such~~ <u>a</u> first<u>-identified</u> pair of one <u>of the query records</u> ~~query record~~ and one <u>of the request records for which</u> ~~request record which satisfied the following conditions:~~

~~an address match condition that requires that~~ the <u>first application server</u> identifier <u>matches the second application server identifier and</u> ~~of the application-server be the same in the query record and in the request record of said first pair;~~

~~a timestamp-match condition that requires~~ the <u>response</u> timestamp <u>matches the</u> <u>request timestamp.</u> ~~in the request record of said first pair to express a moment of time that is within said validity period starting at the moment of time expressed by the timestamp in the query record of said first pair,~~

~~a service-name-match condition that requires that the service name from the query record match the service name from the request record whenever~~

both said records contain said service name item; otherwise, if at least

one among said query record and said request record does not contain

said service name item, then said service name match condition is

considered to be satisfied; and

a uniqueness condition consisting in that no second pair of one query record

and one request record be found to satisfy every said condition (1), (2) and (3) and to have

the request record the same as the request record of the first pair, but the query record

different from the query record of the first pair.

2.   (currently cancelled)

3.   (currently cancelled)

4.   (currently cancelled)

5.   (currently cancelled)

6.   (currently cancelled)

7.   (currently cancelled)

8.   (currently cancelled)

9.   (currently amended) A system for discovering associations between clients and local

name servers, comprising

at least one name server monitor, every said the at least one name server monitor

being associated with an particular authoritative name server and configured to

modify an answer to a domain name resolution query from at least one local

name server, the modified answer including a monitoring address for an

application server, and further configured to create query records,

wherein each query record includes a local name server identifier, an application

server identifier, and a response timestamp ~~and producing query records with~~

~~information from queries to that authoritative name server and from answers~~

~~to said queries~~;

at least one application server monitor, ~~every said~~ the at least one application server

monitor being associated with a~~n~~ ~~particular~~ application server and configured

to receive a request from a client and pass the request to the associated

application server, and further configured to create request records,

wherein each request record includes a client identifier, an application server

identifier of the associated application server, and a request timestamp, ~~and~~

~~producing request records with information from service request to that~~

~~application server~~; and

at least one discovery and monitoring manager configured to compare the query

records and the request records to discover the~~, said discovery and monitoring manager~~

~~collecting information gathered by at least some of said name server monitors and by at least~~

~~some of said application server monitors, and discovering~~ associations between the clients

and the local name servers.

10.   (currently cancelled)

11.   (currently cancelled)

12.   (currently cancelled)

13.   (currently cancelled)

14.   (currently cancelled)

15.   (currently cancelled)

16.   (currently cancelled)

17.   (currently cancelled)

18.   (currently cancelled)

19.   (currently cancelled)

20.   (currently cancelled)

21.   (new) The method as recited in claim 1, wherein the query record further includes a monitoring address for the application server that is the answer to the query and the request record further comprises a monitoring address for the application server that received the service request.

22.   (new) The method of claim 21, wherein a matching pair is further defined as satisfying a condition that the monitoring address for the application server that is the answer to the query in the query record matches the monitoring address for the application server that received the service request in the request record.

23.   (new) The method of claim 1, wherein the query record further includes a name of a service provided by the at least one application server.

24.   (new) The method of claim 1, wherein the request record further includes a name of a service provided by the at least one application server.

25. (new) The method of claim 1, further comprising:

assigning a monitoring address to the at least one application server based which of

the local name servers issued a domain name resolution query for the at least

one service of the at least one application server.

26. (new) The method of claim 1, further comprising:

measuring round trip time between one of the clients and the at least one application

server; and

including the measured round trip time in the request record.

27. (new) The method of claim 26, further comprising:

using the measured round trip time in the request record to determine which of the

local name servers to assign to the at least one application server.

28. (new) The system of claim 9, wherein the application server associated with the at

least one application server monitor is assigned a plurality of monitoring addresses and the at

least one name server monitor is further configured to modify the answer to a domain name

resolution query to include one of the plurality of monitoring addresses based on the local

name server identifier.

29. (new) The system of claim 9, wherein the at least one name server monitor is co-

located with the authoritative name server.

30. (new) The system of claim 9, wherein the at least one application server monitor is

co-located with the application server.

31. (new) The system of claim 9, wherein the at least one discovery and monitoring manager is co-located with the at least one name server monitor.

32. (new) The system of claim 9, wherein the at least one application server monitor is further configured to measure round trip times between the associated application server and clients and to include the measured round trip times in the request records.

33. (new) The system of claim 32, wherein the discovery and monitoring manager is further configured to use the measured round trip times to assign a local name server to the associated application server.

34. (new) A method for associating clients and local name servers, comprising:

receiving a domain name resolution query from a local name server for an address of an application server;

responding to the domain name resolution query with an answer that includes a monitoring address for the application server;

creating a query record that includes an application server identifier that uniquely identifies the application server, the monitoring address for the application server, a local name server identifier for the local name server and a response timestamp;

receiving a request for content from a client, the request being addressed to the monitoring address for the application server;

creating a request record that includes the application server identifier, the monitoring

address for the application server, a client identifier that uniquely identifies the

client, and a request timestamp; and

associating the client with the local name server if the query record and the request

record match, wherein the query record and the request record match if the

application server identifier in the query record matches the application server

identifier in the request record, the monitoring address in the query record

matches the monitoring address in the request record, and the response

timestamp matches the request timestamp.

35.   (new) The method of claim 34, wherein the query record further includes a name of a
service provided by the application server and the request record further includes a name of a
service provided by the application server.

36.   (new) The method of claim 34, further comprising:

measuring round trip time between the client and the application server; and

including the measured round trip time in the request record.

37.   (new) The method of claim 36, further comprising:

using the measured round trip time in the request record to determine whether to

assign the local name server to the application server.

38.   (new) The method of claim 34, wherein the monitoring address for the application
server included in the answer to the domain name resolution query is selected from a plurality
of monitoring address available for temporary assignment to the application server.